

CLAIMS

What is claimed is:

1. A tape feed for a postage meter having a housing with an envelope transport system therein which includes upper and lower drive belts for transporting an envelope through the postage meter, said tape feed comprising:

a receptacle for holding a plurality of tapes and having a downstream wall with a slot therein and a tape discharge opening, said receptacle being mounted in said housing for movement between a first position wherein said receptacle is spaced adjacent one of said upper drive belts with said drive belt out of engagement with a tape in said receptacle and a second position wherein said receptacle is positioned so that a portion of said drive belt extends into said slot and engages a tape in said receptacle and moves said tape from said receptacle through said discharge opening into said envelope transport system; and

a receptacle mover for moving said receptacle between its first and second positions.

2. The tape feed of claim 1 wherein said receptacle mover is a solenoid mounted in said housing and having a plunger connected to said receptacle.

3. The tape feed of claim 2 wherein said plunger is normally extended from said solenoid when said solenoid is de-energized to hold said receptacle in its first position and retractable when the solenoid is energized to move said receptacle into its second position.

4. The tape feed of claim 3 further including a sensor positioned in said housing for sensing when a tape has been gripped by the envelope transport system as it is being moved from said receptacle and cause de-energization of said solenoid.

5. The tape feed of claim 3 wherein said receptacle has a cam arm having a cam slot therein, said plunger of said solenoid having a cam pin attached thereto, said cam pin being positioned in said cam slot to impart movement to said receptacle as said plunger is retracted and extended.

6. The tape feed of claim 3 wherein said receptacle is mounted for pivotal movement in said housing, said cam slot having a first locking portion and a second pivoting portion, said cam pin being positioned in said locking portion when said plunger is extended and in said pivoting portion as it is being retracted.

7. The tape feed of claim 5 wherein said plunger is spring biased into its extended position.

8. The tape feed of claim 5 wherein said plunger is gravity biased into its extended position.

9. The tape feed of claim 7 further including a guide block with opposed walls mounted in said housing under said solenoid, each of said opposed walls having a slot therein, the ends of said cam pin being received in said slots for guiding movement therein.

10. The tape feed of claim 3 further including a pusher bar mounted in said receptacle to bias the tapes in the receptacle against the downstream wall of the receptacle, said pusher bar being retractable to load tapes into the receptacle.

11. A postage meter comprising:

a housing;

an envelope transport system in said housing for transporting an envelope through the postage meter, said transport system comprising a set of upper and lower drive belts;

printheads in said housing for affixing postage to an article being passed underneath said printheads by the envelope drive system;

a tape receptacle for holding a plurality of tapes mounted in said housing for pivotal movement between a first position and a second about a pivot pin and having a downstream wall,

said tape receptacle being positioned upstream of one of said upper drive belts and having a slot in said down stream wall and a discharge opening; and

a solenoid for pivoting said receptacle between its first position wherein said one of said upper drive belts is not contacting a tape in said receptacle and its second position wherein said one of said upper drive belts extends into said slot and engages a tape in the receptacle to draw the tape from said receptacle through said discharge opening into the path of the envelope feed system for engagement thereby whereby said tape is feed underneath the printheads.

12. The postage meter of claim 10 wherein said solenoid includes a downwardly extending plunger connected to said receptacle, said plunger being in a normally extended when said solenoid is de-energized to hold said receptacle in its first position and retractable when the solenoid is energized to move said receptacle into its second position.

13. The postage meter of claim 11 further including a sensor positioned in said housing for sensing when a tape has been gripped by the envelope transport system as it is being moved from said receptacle and cause de-energization of said solenoid so said plunger can return to its extended position.

14. The tape feed of claim 11 wherein said receptacle has a cam arm having a cam slot therein extending downstream from said receptacle, said plunger of said solenoid having a cam pin attached thereto, said cam pin being positioned in said cam slot to impart movement to said receptacle as said plunger is retracted and extended.

15. The tape feed of claim 13 wherein said cam slot has a first locking portion and a second pivoting portion, said cam pin being positioned in said locking portion when said plunger is extended and in said pivoting portion as it is being retracted.

16. The tape feed of claim 14 wherein said plunger is spring biased into its extended position.

17. The tape feed of claim 5 wherein said plunger is gravity biased into its extended position.

18. The tape feed of claim 15 further including a guide block with opposed walls mounted in said housing under said solenoid, each of said walls having a slot therein, said cam pin being received in said slots for guiding movement therein.

19. The tape feed of claim 16 further including a pusher bar mounted in said receptacle to bias the tapes in the

receptacle against the downstream wall of the receptacle, said pusher bar being retractable to load tapes into the receptacle.

20. A method of feeding tapes from a tape receptacle mounted in a postage meter and having a slot therein for access to a tape in said receptacle and a tape discharge slot to the envelope feed system of the postage meter which includes a set of upper and lower drive belts comprising:

moving said receptacle toward one of the drive belts in said upper set until said one belt extends into said slot and engages a tape and pulls the leading edge of the tape from the receptacle through the tape discharge slot into the envelope feed system; and

moving said receptacle away from said one drive belt so that said one belt is out of contact with a tape in the receptacle when the leading edge of said tape is gripped by said envelope transport system.

21. The method of claim 18 wherein said receptacle is pivoted about a pivot pin to move a tape into contact with said one belt.

22. The method of claim 18 further comprising sensing when the leading edge of the tape is gripped by the envelope transport system and pivoting said receptacle

away from said one drive belt in response to said sensing.

23. A tape feed for a postage meter having a housing with an envelope transport system therein which includes upper and lower drive elements for transporting an envelope through the postage meter, said tape feed comprising:

a receptacle for holding a plurality of tapes and having a downstream wall with a slot therein and a tape discharge opening, said receptacle being mounted in said housing for movement between a first position wherein said receptacle is spaced adjacent one of said upper drive element with said drive element out of engagement with a tape in said receptacle and a second position wherein said receptacle is positioned so that a portion of said drive element extends into said slot and engages a tape in said receptacle and moves said tape from said receptacle through said discharge opening into said envelope transport system; and

a receptacle mover for moving said receptacle between its first and second positions.

24. The tape feed of claim 23 wherein drive elements are
30 rollers.

25. The tape feed of claim 23 wherein said drive elements is a mixture of rollers and belts.

26. A postage meter comprising:

a housing;

an envelope transport system in said housing for transporting an envelope through the postage meter, said transport system comprising a set of upper and lower drive elements;

printheads in said housing for affixing postage to an article being passed underneath said printheads by the envelope drive system;

a tape receptacle for holding a plurality of tapes mounted in said housing for pivotal movement between a first position and a second about a pivot pin and having a downstream wall, said tape receptacle being positioned upstream of one of said upper drive elements and having a slot in said downstream wall and a discharge opening; and

a solenoid for pivoting said receptacle between its first position wherein said one of said upper drive elements is not contacting a tape in said receptacle and its second position wherein said one of said upper drive elements extends into said slot and engages a tape in the receptacle to draw the tape from said receptacle through said discharge opening into the path of the envelope feed system for engagement thereby whereby said tape is feed underneath the printheads.

27. The postage meter of claim 26 wherein said drive elements are rollers.

28. The postage meter of claim 27 wherein said drive elements are a mixture of belts and rollers.

29. A method of feeding tapes from a tape receptacle mounted in a postage meter and having a slot therein for access to a tape in said receptacle and a tape discharge slot to the envelope feed system of the postage meter which includes a set of upper and lower drive elements comprising:

moving said receptacle toward one of the drive elements in said upper set until said one belt extends into said slot and engages a tape and pulls the leading edge of the tape from the receptacle through the tape discharge slot into the envelope feed system; and

moving said receptacle away from said one drive element so that said one belt is out of contact with a tape in the receptacle when the leading edge of said tape is gripped by said envelope transport system.

30. The method of claim 29 wherein said drive elements are rollers.

31. The method of claim 29 wherein said drive elements are a mixture of belts and rollers.